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M. F.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/017,428

12/14/2001

Scott Swix

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EXAMINER

WILDER, PETER C

ART UNIT

PAPER NUMBER

2623

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/017,428		SWIX ET AL.	
	Examiner		Art Unit	
	Peter C. Wilder		2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/14/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1, 2, 12, 14, and 16 are amended.

Claims 3-11, 13, and 15 are previously presented.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding both claims 1 and 12 the last line in both claims states "a decoder that decodes the demultiplexed and decrypted transport layer." The examiner notes that a single decoder is decoding the entire transport layer, which according to the applicant's specification on page 24 lines 21-22 is made up of multiple program and information streams. The examiner understands a decoder to be able to decode one stream so a signal decoder decoding the entire transport layer made up of multiple streams does not seem possible.

First, the demultiplexer (703) appears to demultiplex the entire transport layer and produce plural signals or streams otherwise no signal or stream is demultiplexed. Secondly, the decoder (704) appears to either decode the entire transport layer or single stream. If the decoder decodes the entire transport stream, then it is not clear how the video display (607) can display an entire transport stream. If the decoder decodes a signal stream, then the entire transport layer is not sent to the decoder and therefore this contradicts the claims.

With regard to claim 12, lines (2-3) the claim recites "...a tuner array receiving and demodulating a plurality of transport layers, tuning to a specific transport layer identified by a decoder...". This limitation suggests the tuner array is tuned to a specific transport layer by the decoder, thus the decoder is functionally controlling the tuner array. According to Figure 7 which the examiner relates the claimed invention to, the examiner does not see how decoder element 704 has any control capabilities over the tuner array element 120 by the location of the tuner and decoder to one-another in the figure and the flow of the arrows in the diagram. Further more the examiner notes a decoder to have basic functionality of processing a stream of data as a one input and one output device and not a function control type device such as a processor/CPU. If "a decoder" on line 3 is not referring to element (704), then applicant should specify or identify which decoder is performing the claimed function.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Candelore (U.S. 6912513 B1).

Referring to claim 1, Inouse teaches a digital residential entertainment system, comprising:

A media server tuning to a transport layer and transmitting the entire transport layer, rather than a single program stream, over a system bus (Figure 1 two lines running between element 20 and the line between elements 131 and 132, and Column 7 lines 60-65);

A broadband input/output module receiving the transport layer from the system bus and sending the transport layer to a network bus (Figure 1 element 20 teaches and input/output module and element 20T teaches a network bus and Column 9 lines 58-67 and Column 10 lines 1-3);

Inouse fails to teach a network input/output module receiving the transport layer from the network bus;

a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer;

a demultiplexer that receives the decrypted transport layer and that demultiplexes the decrypted transport layer; and

a decoder that decodes the demultiplexed and decrypted transport layer.

In an analogous art Candelore teaches a network input/output module receiving the transport layer from the network bus (Figure 1 element 112 and Figure 2 teaches receiving signals from the transmission medium and being able to transmitt them back onto the transmission medium);

a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer (Column 5 lines 20-34 and Figure 2 eiement 240 teaches decrypting the program data);

a demultiplexer that receives the decrypted transport layer and that demultiplexes the decryped transport layer (Figure 2 element 250 and Column 5 lines 33-42); and

a decoder that decodes the demultiplexed and decrypted transport layer (Figure 1 element 114 and Column 4 lines 33-42).

At the time the invention was made it would have been obvious for one skilled in the art to modify the residential transport layer and bus system of Inouse using the decryption, demultiplexing, and decoding system of Candelore for the purpose of providing copy protection to content (Coumn 2 lines 1-2, Candelore).

Referring to claim 2, depending on claim 1, Inouse teaches a digital-to-analog converter that converts the decoded transport layer to analog signals (Column 9 lines 40-53 and Figure 3 elements 143 and 144).

Referring to claim 3, depending on claim 1, Inouse teaches a conditional access system that restricts access to media services offered via the transport layer to authorized customers (Column 7 lines 34-44 and Figure 1 element 131).

Referring to claim 4, depending on claim 3, Inouse teaches wherein the conditional access system comprises a card reader and an access card (Column 7 lines 34-44 and Figure 1 element 42).

Referring to claim 11, depending on claim 1, Candelore teaches wherein the network input/output module, the decryption module, the demultiplexer and the decoder comprise a computer-readable medium comprising computer-readable instructions, which when executed perform the functions of the network input/output module, the decryption module, the demultiplexer and the decoder (Column 3 lines 8-34).

Claims 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Wong et al. (U.S. 6968364 B1) further in view of Candelore (U.S. 6912513 B1).

Referring to claim 12, Inouse teaches a digital residential entertainment system, comprising:

tuning to a transport layer identified by a decoder and transmitting the entire transport layer, rather than a single program stream, over a system bus (Figure 1 two lines running between element 20 and the line between elements 131 and 132, and Column 7 lines 60-65; The examiner notes that CPU controls what transport layer the tuner is tuning to);

A broadband input/output module receiving the transport layer from the system bus and sending the transport layer to a network bus (Figure 1 element 20 teaches and input/output module and element 20T teaches a network bus and Column 9 lines 58-67 and Column 10 lines 1-3);

Inouse fails to teach a tuner array;

a network input/output module receiving the transport layer from the network bus;

a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer;

a demultiplexer that receives the decrypted transport layer and that demultiplexes the decrypted transport layer; and

a decoder that decodes the demultiplexed and decrypted transport layer.

In an analogous art Wong teaches a tuner array (Figure 2 element 200 and Column 12 lines 37-43).

At the time the invention was made it would have been obvious for one skilled in the art to modify the residential transport layer and bus system of Inouse using the multiple tuners of Wong for the purpose of being able to receive broadcast programs from different sources of programming (e.g., cable and satellite) (Column 12 lines 41-43, Wong).

Inouse and Wong fail to teach a network input/output module receiving the transport layer from the network bus;

a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer;

a demultiplexer that receives the decrypted transport layer and that demultiplexes the decrypted transport layer; and

a decoder that decodes the demultiplexed and decrypted transport layer.

In an analogous art Candelore teaches a network input/output module receiving the transport layer from the network bus (Figure 1 element 112 and Figure 2 teaches receiving signals from the transmission medium and being able to transmit them back onto the transmission medium);

a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer (Column 5 lines 20-34 and Figure 2 element 240 teaches decrypting the program data);

a demultiplexer that receives the decrypted transport layer and that demultiplexes the decrypted transport layer (Figure 2 element 250 and Column 5 lines 33-42); and

a decoder that decodes the demultiplexed and decrypted transport layer (Figure 1 element 114 and Column 4 lines 33-42).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Inouse and Wong using the decryption, demultiplexing, and decoding system of Candelore for the purpose of providing copy protection to content (Column 2 lines 1-2, Candelore).

Referring to claim 14, depending on claim 12, see rejection of claim 2.

Referring to claim 15, depending on claim 12, see rejection of claim 3.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Wong et al. (U.S. 6968364 B1) further in view of Candelore (U.S. 6912513 B1) further in view of Examiner's Official Notice.

Referring to claim 13, depending on claim 12, Candelore teaches the decoder is part of a client set top box (Column 4 lines 1-7 teaches the decoder is part of a set-top box).

Inouse, Wong, and Chandelore fail to teach that a set top box is a thin client device.

The examiner takes Official Notice that ~~it is~~ *thin-client system* well known in the computer art for the purpose of sharing processing functions between server and client, in which the client does not have enough processing capability. Therefore, it would have been obvious to modify the combined systems of Inouse, Wong, and Chandelore with the thin-client system so the user can save money.

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Candelore (U.S. 6912513 B1) further in view of Rowe (U.S. 2005/0060759 A1).

Referring to claim 5, depending on claim 3, Inouse and Candelore fail to teach the conditional access system comprising a secured network conditional access system.

In analogous art Rowe teaches the conditional access system comprising a secured network conditional access system (Paragraph 121 and table below the paragraph and on page 14, Also Paragraph [0149]-[0156], Also Paragraph [0229]).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Inouse and Candelore using the conditional access system of Rowe for the purpose of providing confidentiality, integrity, and authenticity of data communications across a public network (Paragraph [0121] Rowe).

Referring to claim 8, depending on claim 5, Rowe teaches the secured network conditional access system comprises a broadband connection to an authentication service provider (Paragraph [0153] teaches satellite transmission of IP packets which is condered a broadband connection).

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Candelore (U.S. 6912513 B1) further in view of Rowe (U.S. 2005/0060759 A1) further in view of Patel (U.S. 20020004900 A1).

Referring to claim 6, depending on claim 5, Inouse, Candelore, and Rowe fail to teach the secured network conditional access system comprises a secured Internet Protocol (IP) connection to an authentication service provider.

In an analogous art Patel teaches a secured network conditional access system comprises a secured Internet Protocol (IP) connection to an authentication service provider (Figure 2 and Paragraphs [0037] and [0038]).

At the time the invention was made it would have been obvoius for one skilled in the art to modify the combined systems of Inouse, Cnadelore, and Rowe using the secure IP connection to a authentication service system of Patel for the purpose of verifying the authenticity, roles, priveleges, and limitation of the private key holder associated with the pulic key with the certifcate (Paragraph [0006]).

Referring to claim 7, depending on claim 6, Patel teaches the secured Internet Protocol (IP) connection is an Ipsec connection (Paragraphs [0037] and [0038]).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Candelore (U.S. 6912513 B1) further in view of Rowe (U.S. 2005/0060759 A1) further in view of Patel (U.S. 20020004900 A1) further in view of Hylton (U.S. 5793413).

Referring to claim 9, depending on claim 8, Inouse, Candelore, and Rowe fail to teach wherein the braodband connection is a private virtual circuit connection.

In an analogous art Hylton teaches wherein the braodband connection is a private virtual circuit connection (Column 15 lines 66-67 and Column 16 lines 1-7).

At the time the invention was made it would have been obvoius for one skilled in the art to modify the combined systems of Inouse, Candelore, and Rowe using the private virtual circuit connction system of Hylton for the pupose of saving bandwidth associated with circuit establishment and tear down, in situations where certain virtual circuits must exist all the time.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Candelore (U.S. 6912513 B1) further in view of D'Luna (U.S. 20020106018 A1).

Referring to claim 10, depending on claim 1, Inouse and Candelore fail to teach the decrypting, demultiplexing and decoding functions are integrated into a single chip.

In an analogous art D'Luna teaches the decrypting, demultiplexing and decoding functions are integrated into a single chip.

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Inouse and Candelore using the integrated single chip of D'Luna for the purpose of making the set top box more compact or smaller.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inouse et al. (U.S. 6380984 B1) in view of Wong et al. (U.S. 6968364 B1) further in view of Candelore (U.S. 6912513 B1) further in view of Rakib et al. (U.S. 20040172658 A1).

Referring to claim 16, depending on claim 12, Inouse, Wong, and Candelore fail to teach the transport layer is an Ethernet transport layer.

In an analogous art Rakib teaches an Ethernet transport layer (Paragraph [0035] and Figure 1).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Inouse, Wong, and Candelore using the Ethernet as a transmission medium of Rakib for the purpose of transmitting radio signals on a network at a fast data rate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. Wilder whose telephone number is 571-272-2826. The examiner can normally be reached on 8 AM - 4PM Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571)272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PW


HATTRAN
PRIMARY EXAMINER